

Name: _____

Date: _____

Per.: _____

Homework 5.4: Trigonometry Word Problems

Describe each angle as it relates to the situation in the diagram. (angle of elevation or depression?)

1. $\angle 1$

2. $\angle 2$

3. $\angle 3$

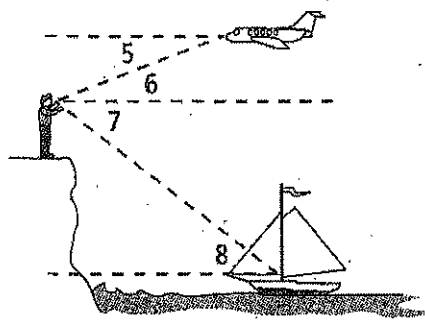
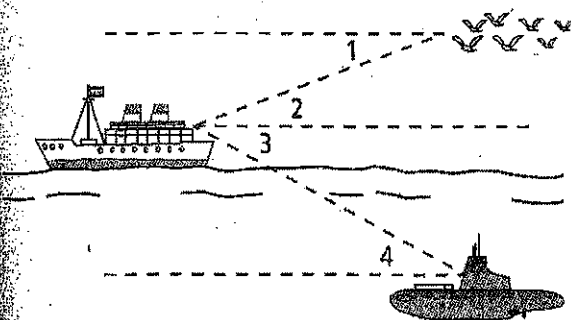
4. $\angle 4$

5. $\angle 5$

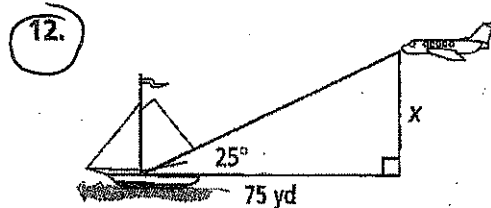
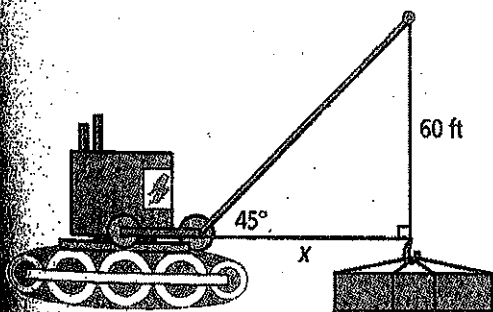
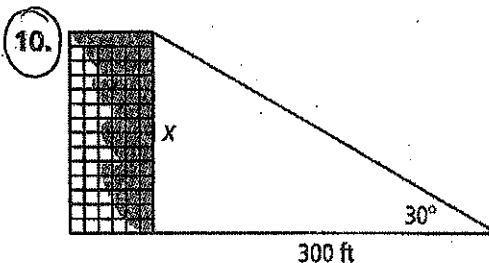
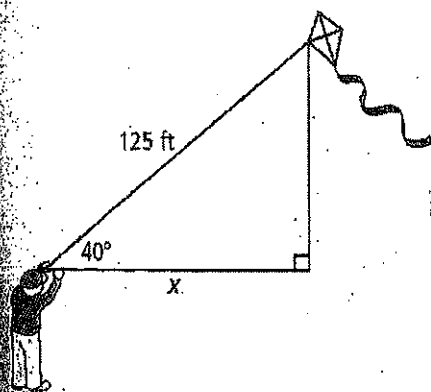
6. $\angle 6$

7. $\angle 7$

8. $\angle 8$



Find the value of x . Round to the nearest tenth of a unit.



A person is standing 40 ft from a flagpole and can see the top of the pole at a 35° angle of elevation. The person's eye level is 4 ft from the ground. What is the height of the flagpole to the nearest foot?

★ Challenge,
but
required!



15. You stand 40 ft from a tree. The angle of elevation from your eyes (5 ft above the ground) to the top of the tree is 47° . How tall is the tree? Round your answer to the nearest foot.
21. A lake measures 600 ft across. A lodge stands on one shore. From your point on the opposite shore, the angle of elevation to the top of the lodge is 4° . How high above the lake does the lodge stand? Round your answer to the nearest foot.